

The prisoners' dilemma, congestion games and correlation

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Abstract

Social dilemmas, in particular the prisoners' dilemma, are represented as congestion games, and within this framework soft correlated equilibria as introduced by Forgó F. (2010, A generalization of correlated equilibrium: A new protocol. *Mathematical Social Sciences* 60:186-190) is used to improve inferior Nash payoffs that are characteristic of social dilemmas. These games can be extended to several players in different ways preserving some important characteristics of the original 2-person game. In one of the most frequently studied models of the n-person prisoners' dilemma game we measure the performance of the soft correlated equilibrium by the mediation and enforcement values. For general prisoners' dilemma games the mediation value is ∞ , the enforcement value is 2. This also holds for the class of separable prisoners' dilemma games.